

ABSTRACT

Methods of inhibiting phosphatidylinositol 3-kinase delta isoform (PI3K δ) activity, and methods of treating diseases, such as disorders of immunity and inflammation, in which PI3K δ plays a role in leukocyte function are disclosed. Preferably, the methods employ active agents that selectively inhibit PI3K δ , while not significantly inhibiting activity of other PI3K isoforms. Compounds are provided that inhibit PI3K δ activity, including compounds that selectively inhibit PI3K δ activity. Methods of using PI3K δ inhibitory compounds to inhibit cancer cell growth or proliferation are also provided. Accordingly, the invention provides methods of using PI3K δ inhibitory compounds to inhibit PI3K δ -mediated processes *in vitro* and *in vivo*.